



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,115	11/30/2004	Gilbert Jeanjean	JEANJEAN	5048
20151	7590	03/06/2006		
HENRY M FEIEREISEN, LLC 350 FIFTH AVENUE SUITE 4714 NEW YORK, NY 10118				
			EXAMINER EWALD, MARIA VERONICA	
			ART UNIT 1722	PAPER NUMBER

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/510,115

Applicant(s)

JEANJEAN ET AL.

Examiner

Maria Veronica D. Ewald

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/4/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/4/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hehl (U.S. 5,129,806). Hehl teaches a hydraulic device for back and forth movement as well as locking of a machine part in particular for opening, closing and clamping half-molds of an injection molding tool of an injection molding machine (column 1, lines 7 – 15), comprising: a cylinder having a first pressure space with a pressure medium (item 52 – figure 1; column 4, lines 10 – 11), a primary piston wherein the primary piston which includes at least one piston rod constructed to float in the pressure medium in the first pressure space (item 25 – figure 1; column 4, lines 10 – 11) and a secondary piston axially movable in the cylinder and having a recess in which the piston rod of the primary piston is movable, said primary and secondary pistons having opposing sides to define confronting contact surfaces which can be brought to impact one another (item 43 – figure 1; column 4, lines 14 – 17); wherein the opposing sides of the primary and secondary pistons are so configured as to form a second pressure space (item 50 – figure 1), when the contact surfaces between the primary piston and secondary piston touch one another, and further comprising a passageway which feeds into the second

Art Unit: 1722

pressure space and is provided for decompressing the pressure medium trapped in the second pressure space (item 61 – figure 1; column 4, lines 16 – 25).

In addition, with respect to claims 3 – 5, Hehl teaches that the hydraulic device further comprises means for generating a negative pressure in the second pressure space (item 50 – figure 1; column 4, lines 40 – 50); wherein the contact surface of the primary piston and the contact surface of the secondary piston are conical (figure 1); wherein the secondary piston has a first section sliding on an inner wall of the cylinder (item 52 – figure 1) and demarcating the first pressure space on a side facing the primary piston, said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder (item 50 – figure 1) so that a third pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item 42 – figure 1).

With respect to claims 6 – 11, Hehl further teaches that the hydraulic device is further comprised of a cylinder with a first section with a first inner diameter and a second section with a second inner diameter wherein a region passed by the secondary piston during its movement is located within the second section and wherein only the second section has a surface to satisfy hydraulic requirements (figure 1; column 4, lines 10 – 15); wherein the second section of the secondary piston partly projects beyond the cylinder (figure 1); wherein the piston rod of the primary piston has a first section which slides in the recess (item 43 – figure 1), said piston rod further including a second section extending in prolongation of the first section and having a smaller diameter than

Art Unit: 1722

the first section so that a fourth pressure space in the form of an annular gap is defined between the second section of the piston rod and the secondary piston (item 42, 50 – figure 1; column 4, lines 12 – 15) wherein the second section is guided through a bore in a tool-side end of the recess of the secondary piston (item 25 – figure 1); wherein the cylinder has an end which faces a moving platen of a three-platen clamping unit of an injection molding machine and has an end piece which is configured as support platen of the three-platen clamping unit, said piston rod is being securable to the moving platen (item 13 – figure 1; column 4, lines 1 – 5). In addition, the primary piston has a side, which is distal to the secondary piston and has a further piston rod defined by a diameter which is smaller than a diameter of the first piston rod, said further piston rod projecting beyond the cylinder (figure 1); wherein the cylinder has an end which faces an injection molding tool and has an end piece which is configured as a platen of a two-platen clamping unit of an injection molding machine, said further piston rod being securable to another platen of the two platen clamping unit (figure 1; column 4, lines 1 – 4).

14. Claims 12 – 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hehl (U.S. 5,547,366). Hehl teaches a clamping unit for an injection molding machine comprising: a support platen (item 22 – figure 2), a fixed platen (item 11 – figure 2), a moving platen (item 12 – figure 2) and a hydraulic device for operating the moving platen (column 3, lines 25 – 27) said hvdraulic device including a cylinder having a first pressure space with a pressure medium (item 14 – figure 2), a primary piston which

Art Unit: 1722

includes at least one piston rod constructed to float in the pressure medium in the first pressure space (item 36 – figure 2; column 4, lines 35 – 40) and a secondary piston axially movable in the cylinder and having a recess in which the piston rod of the primary piston is movable (item 14a, 14b – figure 2), said primary and secondary pistons having opposing sides to define confronting contact surfaces which can be brought to impact one another (figure 2); wherein the secondary piston has a first section sliding on an inner wall of the cylinder and demarcating the first pressure space on a side facing the primary piston (item H – figure 2), said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item N – figure 2), wherein the cylinder is secured to the support platen (item 22 – figure 2), wherein the support platen has bores for passage of the secondary piston (figures 1 and 2; column 4, lines 10 – 20), wherein the piston rod is mounted to the moving platen (figure 2; column 3, lines 32 – 35) and wherein the further pressure space can be hydraulically blocked during closing and opening movements of an injection molding tool of the injection molding machine (column 3, lines 24 – 27).

With respect to claims 14 – 18, Hehl further teaches that the cylinder is secured to the support platen or an end piece of the cylinder is configured as support platen, wherein the support platen has bores for passage of the secondary piston (figures 1 and 2; column 4, lines 10 – 15), wherein the piston rod is mounted to the moving platen and further comprising at least one auxiliary cylinder provided on the support platen or the

Art Unit: 1722

fixed platen (item 15, 15a – figure 2; column 3, lines 27 – 30) and having a piston rod mounted to the moving platen (column 3, lines 32 – 35); wherein the secondary piston has a first section sliding on an inner wall of the cylinder and demarcating the first pressure space on a side facing the primary piston (item H – figure 2), said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item N – figure 2), said first pressure space being hydraulically blockable for the closing movement of an injection molding tool of the injection molding machine, and said further pressure space being connectable to a pressure medium source while the auxiliary cylinder is idle (column 3, lines 25 – 35, 43 – 50); wherein the secondary piston has a first section sliding on an inner wall of the cylinder and demarcating the first pressure space on a side facing the primary piston (item H – figure 2), said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item N – figure 2), said first pressure space being hydraulically blockable for the closing movement of an injection molding tool of the injection molding machine, and wherein the auxiliary cylinder as well as the further pressure space are connectable to a pressure medium source (column 4, lines 15 – 18, 54 – 60); wherein the secondary piston has a first section sliding on an inner wall of the cylinder and demarcating the first pressure space on a side facing the

Art Unit: 1722

primary piston (item H – figure 2), said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item N – figure 2), wherein the auxiliary cylinder has first and second auxiliary pressure spaces and is provided on the support platen (item 15, 15a – figure 2), wherein the first pressure space is hydraulically blockable for an opening movement of an injection molding tool of the injection molding machine (column 4, lines 65 – 67; column 5, lines 1 – 4, 10 – 20) , wherein the further pressure space as well as the first auxiliary pressure space in the auxiliary cylinder are hydraulically relieved and the secondary auxiliary pressure space in the auxiliary cylinder is connectable to a pressure medium source (column 4, lines 15 – 18, 54 – 60); wherein the secondary piston has a first section sliding on an inner wall of the cylinder and demarcating the first pressure space on a side facing the primary piston (item H – figure 2), said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item N – figure 2), wherein the auxiliary cylinder has first and second auxiliary pressure spaces (item 15, 15a – figure 2) and is provided on the fixed platen, wherein the first pressure space is hydraulically blockable for an opening movement of an injection molding tool of the injection molding machine (column 4, lines 65 – 67; column 5, lines 1 – 4, 10 – 20), wherein the further pressure space as well as the first auxiliary pressure

Art Unit: 1722

space in the auxiliary cylinder are hydraulically relieved and the first auxiliary pressure space in the auxiliary cylinder is connectable to a pressure medium source (column 4, lines 15 – 18, 54 – 60).

15. Claims 19 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Wohlrab (U.S. 4,443,179). Wohlrab teaches a clamping unit for a two-platen injection molding machine comprising: a fixed platen (item 5 – figure 1); a moving platen (item 1 – figure 1); and a hydraulic device for operating the moving platen, said hydraulic device including a cylinder having a first pressure space with a pressure medium (item 11 – figure 1), a primary piston wherein the primary piston which includes at least one piston rod constructed to float in the pressure medium in the first pressure space (item 13 – figure 1) and a secondary piston axially movable in the cylinder and having a recess in which the piston rod of the primary piston is movable (item 6 – figure 1), said primary and secondary pistons having opposing sides to define confronting contact surfaces which can be brought to impact one another (figure 1; column 3, lines 25 – 35), wherein the primary piston has a side which is distal to the secondary piston and has a second piston rod defined by a diameter which is smaller than a diameter of the first piston rod, said further piston rod projecting beyond the cylinder (item 13 – figure 1; column 3, lines 25 – 35); wherein the cylinder is mounted to the fixed platen, or an end piece of the cylinder is configured as fixed platen wherein the second piston rod is guided through the fixed platen and attached to the moving platen (figure 1).

Art Unit: 1722

16. Claims 20 – 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hehl (U.S. 5,129,806). With respect to claims 20 – 21 and 28, Hehl teaches a clamping unit for a two-platen injection molding machine comprising: a fixed platen (item 13 – figure 1); a moving platen (item 11 – figure 1); and a hydraulic device for operating the moving platen, said hydraulic device including a cylinder having a first pressure space with a pressure medium (item 52 – figure 1), a primary piston wherein the primary piston which includes at least one piston rod constructed to float in the pressure medium in the first pressure space (item 43 – figure 1) and a secondary piston axially movable in the cylinder and having a recess in which the piston rod of the primary piston is movable (item 25 – figure 1), said primary and secondary pistons having opposing sides to define confronting contact surfaces which can be brought to impact one another (figure 1; column 4, lines 10 – 20), wherein the primary piston has a side which is distal to the secondary piston and has a second piston rod defined by a diameter which is smaller than a diameter of the first piston rod, said further piston rod projecting beyond the cylinder (item 47 – figure 1; column 4, lines 20 – 25); wherein the cylinder is mounted to the moving platen or an end piece of the cylinder (item 13 – figure 1) is configured a moving platen and wherein the second piston rod is guided through the moving platen and attached to the fixed platen (column 5, lines 5 – 15, 60 – 65); wherein the recess of the secondary piston is cylindrical and has an end which is distal to the primary piston and closed by an end piece so that a pressure space is formed in the secondary piston (column 4, lines 10 – 20).

With respect to claims 22 – 24, Hehl further teaches that the secondary piston has a first section sliding on an inner wall of the cylinder (item 52 – figure 1) and demarcating the first pressure space on a side facing the primary piston, said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder (item 50 – figure 1) so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item 42 – figure 1), wherein the further pressure space is hydraulically blockable during closing and opening movements of an injection molding tool of the injection molding machine (column 5, lines 1 – 15); wherein the pressure space in the secondary piston is decompressible during a closing movement of an injection molding tool and connectable to a pressure medium source for an opening movement of an injection molding tool (column 4, lines 13 – 17); wherein the recess in the secondary piston is cylindrical and has an end which is distal to the primary piston and open (figure 1), and further comprising at least one auxiliary cylinder provided on the fixed platen or the moving platen (item 80 – figure 1; column 4, lines 45 – 50).

With respect to claims 25 – 27, Hehl further teaches that the secondary piston has a first section sliding on an inner wall of the cylinder (item 52 – figure 1) and demarcating the first pressure space on a side facing the primary piston, said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder (item 50 – figure 1) so that a further pressure space in the form of an annular gap is defined

Art Unit: 1722

between the cylinder and the secondary piston (item 42 – figure 1), wherein the first pressure space is hydraulically blockable for a closing movement of an injection molding tool, said further pressure space is connectable to a pressure medium source while the auxiliary cylinder is idle (column 4, lines 15 – 17, 20 – 25); wherein the secondary piston has a first section sliding on an inner wall of the cylinder (item 52 – figure 1) and demarcating the first pressure space on a side facing the primary piston, said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder (item 50 – figure 1) so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item 42 – figure 1), wherein the first pressure space is hydraulically blockable for a closing movement of an injection molding tool, said auxiliary and said further pressure space are connectable to a pressure medium source (column 4, lines 15 – 17, 20 – 25, 35 – 40); wherein the secondary piston has a first section sliding on an inner wall of the cylinder (item 52 – figure 1) and demarcating the first pressure space on a side facing the primary piston, said secondary piston further including a second section extending in prolongation of the first section and having a diameter which is smaller than an inner diameter of the cylinder (item 50 – figure 1) so that a further pressure space in the form of an annular gap is defined between the cylinder and the secondary piston (item 42 – figure 1), wherein the first pressure space is hydraulically blockable for an opening movement of an injection molding tool, and the further pressure space is decompressible (column 4, lines 13 – 18), and wherein the auxiliary cylinder is so disposed and hydraulically actuatable that a

Art Unit: 1722


greater surface of a piston of the auxiliary cylinder is acted upon by a pressure medium (column 4, lines 20 – 22, 40 – 43; column 5, lines 5 – 10).

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JOSEPH S. DEL SOLE
PRIMARY EXAMINER
3/2/06

MVE